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SHALL WE EVER REACH THE POLE?

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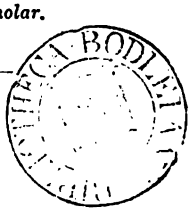
"Very curious and remarkable propositions."—*A distinguished Statesman and Scholar.*



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SHALL WE
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THERE are two questions which are exciting a great deal of attention just now: "Shall the Russians have Constantinople?" and "Shall we ever reach the Pole?" My object is not to deal with the former question, but to endeavour to answer the latter.

"Omne ignotum pro magnifico—and there certainly is a wonderful charm about the North Pole," says the *Times*. It is, nevertheless, no passing charm. True, recent events have brought the subject prominently forward, but for centuries has this problem vexed the souls of philosophers and brave seamen—how to reach that strange, that mysterious spot.

"There is," says Mrs. Somerville, "something

sublime in the contemplation of these lofty and unapproachable regions—the awful realm of ever-during ice and perpetual fire, 'whose year consists of one day and one night.' The strange and terrible symmetry in the nature of the lands within the polar circles, whose limits are to us a blank, where the antagonistic principles of cold and heat meet in their utmost intensity, fills the mind with that awe which arises from the idea of the unknown and the indefinite."

How the hearts of many of this world's great navigators have yearned after a knowledge of the earth's extremities! What must have been Parry's feelings when he found, notwithstanding his great resolutions to persevere, Nature bringing him back on the floating ice as fast as he advanced, and, as it were, saying to him, "Thus far shalt thou go!"

Who can tell Hall's feelings when, on his last sledging expedition, from that rugged headland he saw in that strange "circle of light" all that he was fated to see?

And, to come to the events of the last few months, is there not an almost universal feeling of regret that our own seamen did not brave another winter

for another effort? It is not too late even now to try again and secure for ourselves that which we shall otherwise surely lose—the honour of solving the Polar mystery.

In answering the question: "Shall we ever reach the Pole?" I hope to show that "the Pole is impracticable," because impossible; and I must ask the reader to suspend his judgment until I have fully laid before him what a most distinguished statesman and scholar of the day considers to be "very curious and remarkable propositions."

Upwards of thirty years ago, M. Plateau, the celebrated Belgian physicist, made some very curious experiments with fluids. He placed a small sphere of oil in the midst of a liquid of the same specific gravity, a mixture of water and alcohol. There the oil remained freely suspended and perfectly spherical.

He introduced into the oil a small metallic disc with a wire rod passing through its centre perpendicularly. The disc was completely hidden in the sphere of oil at its equator, and the rod passed through its north and south poles.

By a mechanical contrivance the disc and wire

were made to rotate slowly, when the sphere rotated also, flattening at the poles and swelling out at the equator. When the rotatory movement of the disc was stopped, the oil returned to its spherical form. It is clear, therefore, that the rotatory movement produced the flattening at the poles and the bulging out at the equator.

When the sphere was made to rotate more rapidly, it took its maximum of flattening, then *became hollow above and below round the axis of rotation*, stretching out continually in a horizontal direction, and finally, abandoning the disc, was transformed into a perfectly regular ring. "The heavens," says M. Plateau, "exhibit to us a body of a form analogous to our liquid ring; I allude to Saturn's ring."

M. Plateau then showed that the liquid nearest the axis was by the rotation driven from it, and that when the rotation continued "there necessarily resulted the formation of a sort of circular cushion (bourrelet) more or less marked. In other words, the mass soon became *hollow in the middle* and swelled out all around. . . . . All the liquid left the axis for the bourrelet, and the latter became in a manner a veritable ring."

Let us now apply this process to a planet—say the earth. It is the almost universal belief that it was originally a fluid of a gaseous form. It is in revolution, and consequently flattened at the poles and bulged out at the equator. M. Plateau himself admits that when we compare the sphere of oil with the planet "the results must be analogous, if not identical, with respect to the figure, which that mass assumes."

What, then, is the conclusion one is forced to? It is this: the earth must be hollow certainly round the axis, and if the rotatory power were greatly increased, the planet would become a ring. If, then, the earth is hollow round the axis, it must be hollow round the north and south poles, and therefore the poles have no real existence, but are imaginary points.

An objection will doubtless be raised in this form: When the rotation of the sphere of oil was slow, although there was flattening at the poles, there was no hollowing. To this I reply that the hollowing is as much a part of the effect of the rotation as the flattening is, but it is unable to manifest itself at the poles of the oil-sphere, where the velocity

is very much less than at the equator, because the surrounding fluid prevents the particles of oil at the poles leaving them; as soon, however, as the rotatory movement is so great that the particles of oil round the poles have a force sufficient to overcome the pressure of the surrounding liquid, the hollowing at the poles is made manifest. Everyone must admit that the principle was at work throughout, and the increased motion only increased it to such an extent that it then became manifest. The flattening is irrespective of the surrounding liquid, being the result of the bulging out at the equator.

We have not to deal with this difficulty in regard to the earth, as it is surrounded practically by empty space. The reader will bear in mind that I am speaking of the earth when it was in a fluid state, and took its form; but even as regards the earth of to-day, including the atmosphere, the same holds good, since the atmosphere partakes of its motion.

Now, as the earth's rotation is comparatively slow, the progress towards the ring-form is but slight; the rotation is, however, sufficient to drive all matter from the axis at least 318 miles, and so far the earth would be a sphere of fluid with a hollow cylinder of

2,000 miles in circumference, extending from pole to pole. But as the earth was no doubt originally a nebulous mass undergoing condensation, the act of rotation would force away the matter round the axis with a greater force the nearer the matter was to the centre; and as this matter would in time, as the exterior cooled and a crust was formed, be unable to force its way outwards near the equator, it would be whirled towards the north and south poles and pass out of the polar openings there, running up the sides of the interior towards the poles, like water running up the inside of a bucket when the latter is whirled.

If now we suppose such a revolving mass to have one pole directed towards the sun, there would result that which would agree in every particular with the observed facts in a comet, such as cylindrical or conical hollow tail, preceding fan-like sector directed towards the sun, and *apparently transparent* nucleus, which, however, is nothing more than the wide central opening extending from pole to pole, through which the sun or a star has been observed to shine unhindered.

In a planet we have exactly the same process modified through the axis not being directed towards

the sun. We have only to suppose that the internal matter of the earth was driven forth at some far distant era, at the time when the earth was coming to perihelion, and therefore with its northern hemisphere directed from the sun, and that this matter was *not* driven off to such a distance that gravity could not act upon it and bring it back upon the surface, and we have a flood of light upon many points yet unsolved. It would explain why the land of our globe is for the most part in the northern hemisphere, having eastern shores more or less in a N.E.—S.W. direction, and why we have little land in the southern hemisphere, less atmosphere there, and greater cold round the south pole. The result of the constant removal of the matter within the globe to the exterior is a hollow spheroid.

Now, as the polar diameter of the earth is twenty-six miles less than the equatorial, it can be shown that the crust must be between twenty-five and twenty-six miles in thickness. This agrees with temperature experiments, which prove that at a depth of twenty-five miles the heat is so great that iron and granite, if they exist there, must exist in a liquid form.

Our earth then is, as it were, a vast bubble, having

a small opening at each pole. Perhaps the reader will get the clearest idea of the dimensions by taking an orange of about two inches in diameter to represent the earth; the polar opening will be about one-sixth of an inch in diameter, or it may be represented very nearly by the little circular depression caused by the removal of the stalk. He will be able to get a pretty accurate idea of the thickness of the crust by imagining the peel of the orange to be represented by paper $\frac{1}{200}$th of an inch in thickness, that is, the thickness of the ordinary paper in a printed book.

How those who ought to know better can go on believing that a revolving fluid can possibly have a solid centre, or, indeed, matter of any form at the centre, has long puzzled me. It is not only a direct violation of the elementary laws of fluids in motion, but it is contrary to the laws of the uniformity of Nature, upon which all valid reasoning on natural phenomena is based. It is utterly opposed to the results of direct experiment. Can we not see its refutation any day of our lives when we make the water in a vessel rapidly revolve? Did not M. Plateau prove it conclusively by his experiments?

Does not the up-rushing water of the water-spout show that around the axis of the spiral revolving cone of descending cloud there is a vacuum? Does not the increasing fall of the mercury as one approaches the central area of a cyclone also refute such a belief? Let the reader examine the weather chart in the *Times* of December 20th to 23rd last, and notice the cyclone—which is nothing more than a vast whirlwind, a great funnel of revolving air in our atmosphere, like a sun-spot, in fact an earth-spot—travelling in four days from the west of Ireland, round through the English Channel into the North Sea and back to the west coast of Ireland again; let him observe how the barometer gradually falls as we approach the centre of the cyclone, where we find it the lowest, thus proving that the pressure of the atmosphere is less there partly because less atmosphere exists in that column of air—a partial vacuum being produced.

Again, does not every fresh discovery in the realm of astronomy convince us more and more that Nature has an uniformity? Is it not then most unreasonable to ask us to believe that Nature has one law for a terrestrial fluid and quite a different—

indeed the very opposite—for a cosmical one? Let us be guided by reason and common sense.

If, then, the earth be but a bubble, we may reasonably conclude that the sun and the other planets are of a similar constitution. Strangely enough, within the last three or four years Professor Young, of America, has shown on quite other evidence that the sun is in all probability only a bubble. The proved action of the planets, especially Jupiter and Venus, in the production of sun-spots, is evidence of the unsubstantial nature of the sun. The evidence for this constitution of the sun and planets is far stronger than one would suspect—indeed so strong is it that the surprise at finding such evidence will be exceeded by the surprise that it has been so long overlooked.

Taking the corona as a part of the atmosphere of the sun, and as such partaking of its motion, and calling the two together the sun, it has been frequently observed in eclipses that the sun is not round, but quadrangular, four radial streamers extending to the four corners of the quadrangle, and, therefore, midway between the poles and the equator of the sun; the two northern streamers forming the

well-known V-shaped gap or rift, springing from the neighbourhood of the north pole of the body of the sun; the other two streamers forming a similar gap round the south pole.

What are these gaps? I can confidently affirm that they are funnel-shaped cavities in the corona formed by the rotatory motion of the sun on its axis. The matter whirled through the polar openings is not, as in the comet, driven off in the form of a tail, since there is no body to act upon the matter whirled from the sun, as we have in the case of the sun acting upon the comet. The consequence is, the matter from the polar openings falls back upon the sun, as we have noticed in the fan or preceding tail of the comet, making its way to the equator, round which it doubtless extends as a large ring, known to us as the zodiacal light.

It is strange, with this definite knowledge that the sun, including the corona, is not round, but four-cornered, that astronomers have not hastened to remove that blot they have put on the reputation of Sir William Herschel. They are unanimous in asserting that this most experienced astronomer must for months have been deceived by an optical illusion

in believing that he repeatedly saw Saturn with a rectangular shape.

On this subject Mr. Hind has written:—"The figure of Saturn appears to be a perfect ellipse, though it has long been supposed to resemble a parallelogram, 'with the four corners rounded off, so as to leave both the equatorial and polar regions flatter than they would be in a regular spherical figure.' This notion was first advanced by Sir William Herschel after examining the planet in reflecting telescopes of ten, twenty, and forty feet focal length. Actual micrometric measures by Professor Bessel, in 1833, gave results unfavourable to this deviation from an elliptical outline; and a recent series of observations at our Royal Observatory, by the Rev. R. Main, has fully confirmed the measures of the German astronomer."

But this is as if one astronomer said that he saw the last new star shining with a light of the first magnitude, and another were to say that could not be, as he saw it a week after, and it was of the fifth magnitude. Bessel made his measurements nearly thirty years after Herschel's observations. Surely here was sufficient time for the greatest changes. I

cannot go into details here, but it can be shown that Saturn had the quadrangular shape at the time when Herschel saw it, and lost it shortly afterwards. When first observed the greatest diameter of Saturn was at latitude 46° 38′, then it moved to 45° 31′, and finally to 43° 20′. On the 26th May, Herschel found the semi-equatorial diameter to be 11″.27, and the semi-diameter at 45°, 11″.98, and *the next day* these had changed to 11″.44 and 11″.88. Sir William noticed that "the angles are rounded," and at the extremities of the maximum axis "the curvature of the disc is very strongly prominent."

Can any man of common sense read this, and not feel that it is a gross libel on the scientific character of this great man to say, that all this was an optical illusion. "Many years ago," says Mr. Hind, "Mr. Airey showed that the Herschellian form of Saturn could not be accounted for by theory." Quite so; but it can now. *Nous avons changé tout cela.* Saturn was undergoing a violent convulsion, incandescent liquid matter was ejected from the polar openings, this became temporarily heaped up at middle latitudes, giving the planet a somewhat quadrangular shape, and, as the observations

showed, afterwards slowly worked its way to the equator.

The well-known brilliant spots at the poles of Mars are not snow or ice, as is universally believed, but incandescent matter. If I could go into the subject here, it would be no difficult matter to show this. I must, however, content myself with two or three remarks on it. The sun's intensity on Mars—not half what it is on the earth—could not reduce a circle of ice and snow of 1,000 miles in diameter to one of 500 miles in diameter in about a month, even if it could at all. The brilliancy is dazzling, not such as ice or even clouds would give. The heaped-up appearance observed is actually due to the liquid incandescent fountain.

Again, the truncated appearance observed about the horns of Venus and Mars when gibbous,—supposed to be due to enormously high mountains,—receives a natural explanation on my theory.

Regarding the earth then as a hollow spheroid,—by the way, however, not an exact spheroid, for it is known that the diameter of the earth at middle latitudes is greater than it would be in an exact spheroid, which is again in accordance with theory,

—there is evidence that the polar openings vary in diameter with the position of the earth in its orbit. The extent of variation is, however, nothing like that observed in Mars, as the earth has but little eccentricity, and is much farther advanced in its cooling stage, having a true solid crust, which cannot I think be said of Mars.

To this variation in the diameter of the polar opening we may attribute the sudden and great disruptions which occur in the polar regions, "breaking-up, as with a magic power, land-ice and extensive floes thirty feet thick, which in a few minutes are small fragments." The perpetual fluctuations of the polar openings may help to give rise to the well-marked polar tides and currents.

Many celebrated Arctic geographers believe that an open polar sea exists round the Pole. The existence of a large opening, over 600 miles in diameter, into the interior of the earth, cannot but have an influence upon the climate of the circumpolar regions.

This open polar sea, Maury conjectures, is produced by a current in Davis' Strait passing under the ice and making its appearance round the Pole,

producing an area of warm water acting in a beneficial manner upon the surrounding Arctic climate. But before Maury, Wrangel and other Russian geographers and navigators had conjectured its existence from various facts. Wrangel states that, when in the vicinity of this open polar sea, he was by *north* winds always enveloped in damp air, and that in Arctic Siberia it is *not* a wind from the north that is the most piercing. Dr. Kane believed that he reached the verge of this open polar sea in latitude 82°. And although the last English Expedition has shown that there were no signs of it at 83° 20′, the two show that there are hard and mild seasons in the Arctic regions as well as in more temperate latitudes. Taking the experiences of our last Expedition and comparing them with those of previous ones, we must conclude that 1876 was a year of exceptional severity, which will be found to be due to a deficiency in the usual supply of heated vapour from the interior of the earth, which in its turn is largely dependent on internal commotion, and this is intimately connected with the sun-spots and their periods.

I attach no importance to the possible objection

that our Expedition could not have been so near the polar opening—less than 150 miles—and not feel its effects, since the heated vapour rushing forth would not locally affect the temperature of the surrounding atmosphere beyond about fifty miles; and who does not know the astonishing difference between wintering in the Isle of Wight and in Yorkshire? In connection with this subject I may observe that the ice lying round Spitzbergen has sometimes cleared away, leaving a channel 150 miles in breadth. This would seem to show that there is some great modifying influence not far off, which also gives to the ice-fields, sometimes thirty miles in diameter, a rotatory motion of great velocity.

In journeying towards the Pole, it is then impossible to advance beyond the points which are on the circumference of a circle of which the imaginary Pole is the centre, having a radius of 318 miles. This circle, with a diameter of 636 miles, bounds the extremity of land and water towards the Pole. A distance of 318 English miles is equivalent to 4° 34′, which, subtracted from 90°, gives 85° 26′ as the latitude of the circumference

of this circle, and, with 83° 20′ as the highest latitude attained, there remains a distance of 2° 6′, or 146 English, or 126 geographical miles, to be yet explored.

It is well known that the *Polaris* Expedition experienced quite a different season from that of 1876. Our Expedition found Nature there as silent as the grave, and as devoid of life as the Sahara. How different in 1871! "Animal life was found to abound. . . . . The waters were found to be filled to an extraordinary degree with marine invertebrata, including jelly-fish and shrimps, ... seals being very abundant. Numerous insects were observed . . . . . butterflies, flies, bees, and insects of like character." There appears every reason to believe that Captain Hall would have pushed on beyond his highest latitude, 82° 16′, had not death suddenly overtaken him. There is a certain amount of mystery about his death; if, however, we examine the surrounding circumstances the cause may be discovered. Captain Hall, Mr. Meyer, and others, went on a sledging expedition as far as Repulse Harbour. From an elevation of 1,700 feet they saw land on the north-east, trending east and south-east

till lost in the distance. On the west land was found extending north as far as the eye could reach. "Mr. Meyer also states that *directly to the north* he observed, *on a bright day*, from the elevation mentioned, a line of light apparently circular in form, which was thought by other observers to be land, but which he supposed to indicate open water." We do not hear what Hall's opinion was; but we know that the expedition returned immediately, to prepare for another on a greater scale; it is not improbable that Hall's object was to discover the nature of this "line of light." Shortly after his return to the *Polaris* he was struck with apoplexy, and died. The apoplexy was, I conceive, the result of excitement caused by a belief that he was about to make some extraordinary discovery. Certainly it cannot be doubted that had Hall lived we should not now be bewailing our misfortunes amid the so-called palaeocrystic ice.

Now from this elevation of one-third of a mile the *Polaris* party could not possibly see the Pole, which would be over 400 miles away; even allowing for the curvature of the earth being less in the far north, the horizon at that elevation would not be

more than fifty miles distant. This "line of light, apparently circular in form," could not, therefore, be the Polar opening; but it is intimately connected with it. It is, I believe, an atmospheric phenomenon, which I shall endeavour to explain.

The atmosphere, I have said, partakes of the same movement as the earth, and a hollow cylinder or cone will, therefore, be formed in it at the poles, through which incandescent matter is constantly escaping. It was the top of this cylinder, or rather the base of the inverted cone which presented to the *Polaris* party the appearance in perspective of an elongated ellipse, or "line of light apparently circular in form." There is a confirmation of this view in the fact that, if the atmosphere is about forty-five miles high, the outer surface of that part as nearly as possible over the Pole would be slightly above the horizon to an observer at 82° 9′, just where the *Polaris* party stood.

If the existence of this Polar opening be established, and geological evidence bear out the natural results, "then unquestionably," writes a very distinguished archæologist, "your conclusions would render many things clear which are now mysterious enough."

The reader may be curious to know what these conclusions are. I can, however, here mention only a few of them.

The streams of matter, which in the early ages of the world issued from these Polar openings, fell over upon the earth in vast mineral storms, drifting like the snow-storms of our time, which are the nearest approach to them, though on a very insignificant scale. When the matter fell into the ocean it was gradually precipitated. In both cases the result was to lay down the strata, as we for the most part find them, in a NE.—SW. direction.

Coming to the time just previous to the appearance of man, the land-surface of the globe was an oblong, extending from southern Arabia to Austria; at which time the globe was revolving on an upright axis. In consequence of the revolution of the earth from west to east, this oblong stream of matter, on issuing from the Pole, would descend into the torrid zone, not, however, so as to lie at right angles to the equator, as it would if the earth were not in revolution, but with its south-eastern side making an angle of $27\frac{1}{2}^\circ$ with it.

The next convulsion in Nature inclined the axis

23½°, producing the seasons instead of the previous perennial spring. This must have commenced when the earth was approaching perihelion, because it is then that the matter is ejected in vast quantities, as we see in the case of a comet. It is worthy of notice that the date of the commencement of Noah's Deluge corresponds with our November 1st. Let us suppose now that at that time the earth's axis was thrown out of the perpendicular and inclined 23½°; it would pass perihelion with the north pole turned away from the sun, as at the present day. But it would *necessarily* follow that all oblong tracts of land laid down at and from that time would have their S.E. edges not inclined now at an angle of 27½° with the equator, as when the axis was perpendicular, but at an angle of 51°. Now this is found to be exactly the case, or, in other words, the S.E. edges of all the tracts of land on the globe make an angle of 23½° with the original tract—the Arabico-Austrian. At that time two streams of matter issued from the north pole, fell over upon the surface of the globe, being laid down contiguous to the primeval tract, and, acting in conjunction with upheaval and depression,

hurled the water of the ocean in upon the land between, thus bringing a deluge over the whole existing land-surface. Eventually there resulted a world as it was known to the Ancients. Of the seven oblong land-surfaces in all formed, some remain in their integrity, or have been enlarged so as to overlap; others have been wholly modified by the changes which have taken place during the last 3,000 years. For instance, the great oblong which stretched across the Atlantic in a north-west (the normal) direction,—traces of which we see in the Madeira, Azores, Cape Verde, and Bermuda Isles, and traditions of which we have in the Great Atlas Isles,—has disappeared, and, in consequence of compensating upheaval, the great ocean which swept across Central Africa in a north-west direction,—the remains of which we have in the vast inland seas,—has also disappeared.

Now there are many difficulties in ancient geography and mythology which would receive reasonable explanation, if we could show that the world was what the Ancients assert it to have been—portions of Europe, Asia, and Africa, completely surrounded by the ocean. If Virgil could say with truth of

one of his characters, "Seque novo veterum deceptum errore locorum," of ourselves it is, if possible, more true that we have been deceived by the *modern error* about ancient lands.

The subject includes the consideration of the voyages of the Phœnicians to Ophir, Tarshish, the Great Atlas Isles, Ultima Thule, and the extreme north-west of Europe; how the ships of Hiram reached Eziongeber from Tyre; the wanderings of Io; the Argonautic Expedition in its various accounts, the wanderings of Ulysses, with the origin of the Descent into Hades, given in the Tenth Book of the Odyssey.

I have no doubt that the Phœnicians made far greater discoveries than we give them credit for. They doubtless purposely added mystery to mystery, but many of the genuine facts of travel were made mythical by those to whom they were related. To comprehend the full extent of the voyages of the Phœnicians, especially to the distant north-west, it must be borne in mind that Europe — except its southern portions — was swept by the ocean, and indeed the whole region away to the neighbourhood of the Pole was one vast northern ocean interspersed

with islands, and having consequently a mild climate.

To my mind the Phœnicians had visited—perhaps were driven to—the neighbourhood of the Pole, and brought back such reports as originated the popular belief that on the other side of Ocean existed an opening into the earth, which formed the Descent into Hades, the place where Ulysses (really the Phœnicians) from a rugged promontory beheld the low-lying island encircled by the ocean, and from the midst of the open earth in which he saw the smoke *rushing forth* in the palace of Kirke (Circe). This is probably a Phœnician word connected with the Hebrew Kikar, a circle or a circular tract of land.

I must ask the reader to notice that Ulysses saw the smoke rushing forth from the midst of a low-lying island surrounded by the ocean, so that it was not a volcano; and I do so because I have a conviction that, although when the Phœnicians visited it it was a place "where neither the works of men nor of oxen appeared," since that time the strip of land which encircles the Polar opening—this island surrounded by the ocean, in the midst of which is the Descent into Hades, whence rushes forth mist and

fiery vapour—has become the home of a portion of the human race, who, upwards of 2,500 years ago wandered north, and were cut off from the rest of humanity by the great change in climate which followed the upheaval of the northern portions of Europe, Asia, and America. It is quite true that the goddess Kirke directs Ulysses to go still further to the house of Pluto, strictly within the earth—the Infernal Regions — but we must remember that Homer worked out these journeys from vague (but true) reports, without any really intelligent idea of the positions other than that they were a great way off.

I believe I can trace the spread of the knowledge obtained by the Phœnicians in the writings of their neighbours, the Jews. Take the first chapter of Genesis and the second verse: "And the earth was without form and void," which would be more accurately rendered: "And the earth was hollow and empty." And it is reasonable to suppose that that was the most suitable time for animal and vegetable life to appear, when the internal matter had been for the most part expelled and deposited on the exterior.

And, again, in the Book of Job, take those three

remarkable verses of the 26th chapter. I mean the 5th, 6th, and 7th, which contain a depth of science which even this nineteenth century has not fathomed and comprehended:

"The purifiers will be brought forth from beneath from the west and they that descend on them.

"Naked is the infernal region before Him, and not a covering to perdition (hell).

"He stretched out the secret region (heaven) over the hollow place; He spreadeth out the land upon nothing."

While I am prepared to defend the above as a literal and exact translation of the original Hebrew, I would offer a word or two of explanation. The word "purifiers" is the Hebrew "rephaim," meaning also "giants." How it came to mean giants is one of the most curious points in mythology, and is intimately connected with the origin of the legend of the Titans. The "purifiers" or "renovators" are those destruction-bearing streams, personified, however, as "angels of destruction," which in the early history of the world have been brought forth from beneath, have swept through the polar opening, have divided into seven branches, one for each great land

tract, which are all centres of creation, and descended from the north-west, (the "dark west" of the Ancients), blotting out one order of things, and, phœnix-like, introducing another; the germs of the new fauna and flora descending with them, having been prepared in the interior of the earth.

There can be no doubt that these streams are more or less constantly in activity, bringing us now an abundance of rain, now an epidemic upon man and beast, now a plague of locusts or of flies—mere summer rivulets now, but, like Job, we may use the future, and say "they will be brought forth" at the next great convulsion, perhaps personified by the seven angels with seven vials to pour out upon the earth.

We learn from this passage in Job the position of Hades, just under the north, and that Heaven is not in Halcyone or some other remote region of space, but stretched out over the hollow place, a great gulf existing between them. And I can imagine some less venturesome wanderers than the daring Phœnicians, some early Greeks, long before Homer's day, impressed with the stories of the Phœnicians about a Descent into Hades and an Abode of the Gods

above, in the "dark west," as they guided their frail barks through the remote regions of the Archipelago, catching sight of the brilliant tops of Olympus in the distant north-western horizon, and saying, "Surely this is none other than the glorious Abode of the Gods."